



UNITED STATES PATENT AND TRADEMARK OFFICE

M
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,329	07/30/2003	Avi J. Ashkenazi	P1245R1PIC1	8754
9157	7590	11/09/2006	EXAMINER	
GENENTECH, INC. 1 DNA WAY SOUTH SAN FRANCISCO, CA 94080			KAUFMAN, CLAIRE M	
			ART UNIT	PAPER NUMBER
			1646	

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/630,329		ASHKENAZI ET AL.	
	Examiner		Art Unit	
	Claire M. Kaufman		1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/24/03, 8/15/06</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1646

DETAILED ACTION***Election/Restrictions***

Applicant's election of Group I in the reply filed on 9/1/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 33-44, 46-54, 57 and 59-60 of instant application No. 10/630,329 ('329) are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 141-146 and 149 of copending Application 10/660,128 ('128). The instant claims are drawn to an agonist antibody or fragment thereof that binds DR4 or an extracellular fragment thereof. Copending application 10/660,128 recites claims drawn to a composition comprising an agonist antibody or fragment thereof that binds DR4 or the extracellular domain thereof in composition with TRAIL or a chemotherapeutic drug. The antibody is obvious over the composition because it is part of the composition and has apoptotic

Art Unit: 1646

activity both by itself and in conjunction with the other composition components. The agonist antibody encompasses polyclonal, monoclonal, labeled, chimeric or a fragment (see paragraph bridging pages 10-11 of '329 and paragraph bridging pages 17-18 of '128) which binds the DR4 antigen, which itself may be glycosylated or not (which depends on the type of cell in which it is produced (see p. 9 second paragraph of '329 or 1st paragraph of p. 13 of '128).

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 59 and dependent claim 60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 59 is indefinite for two reasons. First, it recites "a DR4 extracellular domain". DR4 has a single extracellular, transmembrane and cytoplasmic domain. The use of the term "a" before DR4 implies there is more than one extracellular domain, so the claim is unclear. Second, the claim recites a "polypeptide consisting essentially of a DR4 extracellular domain". Because the specification defines a "DR4 extracellular domain" as "essentially free of the transmembrane and cytoplasmic domains of DR4" (p. 9, line 28, emphasis added by Examiner), and the claim uses the phrase "consisting essentially of" to modify DR4 extracellular domain, it is unclear what is meant by a polypeptide consisting essentially of a region of DR4 essentially free of the transmembrane and cytoplasmic domains. The metes and bounds of the claim cannot be determined. In view of the definition in the specification, it appears that replacement of "a polypeptide consisting essentially of a" with --the--, would obviate this rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 1646

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 33-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to an antibody that binds a polypeptide consisting of amino acids 24-238 of SEQ ID NO:2. This is not an original claim and there is no basis in the specification for the polypeptide consisting of those amino acids. The specification says the signal sequence is 1-23 and the extracellular domain ends at amino acid 218. There is nothing in the specification to lead the skilled artisan to amino acid 238 as the end of a fragment. Therefore, this is new matter.

Claims 59 and 60 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to an agonist antibody or fragment thereof that binds DR4 extracellular domain. The specification defines DR4 as including "native sequence DR4", which includes naturally-occurring variants forms (alternatively spliced forms) and allelic variants (p. 9, lines 11-26). The application discloses a single DR4 of SEQ ID NO:2. An agonist antibody that binds the extracellular domain of the DR4 polypeptide of SEQ ID NO:2 meets the written description provision of 35 USC 112, first paragraph. However, the claims are directed to or encompass agonist antibodies that bind polypeptides with sequences other than SEQ ID NO:2, such as corresponding sequences from other species, allelic variants and splice variants.

Art Unit: 1646

Antibodies binding sequences other than SEQ ID NO:2 do not meet the written description provision of 35 USC 112, first paragraph.

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, clearly states that “applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention*. The invention is, for purposes of the ‘written description’ inquiry, *whatever is now claimed*.” (See page 1117.) The specification does not “clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed.” (See *Vas-Cath* at page 1116).

With the exception of the sequence referred to above, the skilled artisan cannot envision the detailed chemical structure of the encompassed antigen polypeptides, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it. The nucleic acid itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF’s were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence.

Therefore, only an agonist antibody that binds the extracellular domain of SEQ ID NO:2, but not the full breadth of the claim meets the written description provision of 35 U.S.C. §112, first paragraph. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. § 112 is severable from its enablement provision (see page 1115).

Priority

The instant application receives an effective filing date of 1/26/98 for the pending claims.

Whenever the application has an earliest constructive reduction-to-practice that is later than the earliest constructive reduction-to-practice of a published application having allowed claims or a patent with which it interferes, the applicant must make a priority showing under 37 CFR 41.202(d)(1). The applicant may file the showing to overcome a rejection based on 35

Art Unit: 1646

U.S.C. 102(a) or 102(e) when an affidavit is not permitted under 37 CFR 1.131(a)(1) because the applicant is claiming interfering subject matter.

If no showing has been filed, and the application's earliest constructive reduction-to-practice is later than the earliest constructive reduction-to-practice of a patent or published application, then the examiner must require a showing of priority. This showing is necessary because an insufficient showing (including no showing at all) can trigger a prompt judgment against the applicant in an interference. 37 CFR 41.202(d)(2). The applicant may choose to comply with a requirement under 37 CFR 41.202(d)(1) by suggesting an interference under 37 CFR 41.202(a).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 33-60 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,943,020.

Applicants state in the remarks filed 9/1/06 that claims 33-58 of the instant application correspond to claims 1-26 of the patent. Those antibodies claimed in the patent anticipate the antibodies that bind the DR4 extracellular domain of claims 59-60 of the instant application.

Claims 33-60 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,461,823 (#9 in IDS filed 12/24/03 by Applicants).

US 6,461,823 teaches agonist antibodies against DR4 (col. 25, lines 20-22). This includes antibodies that specifically bind DR4, including wherein DR4 is glycosylated and the antibody is polyclonal, monoclonal, chimeric, labeled or an antibody fragment (e.g., claims 1-

Art Unit: 1646

10). Also taught is a cell, including a hybridoma, that produces the antibody (claims 11-12) and methods of producing the antibody (*e.g.*, claim 53).

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pan et al., Science 276 :111, 4 Apr 1997, (#87 in IDS filed 12/24/03) teaches DR4 polypeptide. While it would have been obvious to make antibodies to this receptor or its extracellular domain, including agonist antibodies, this reference is cited only as cumulative with the references relied upon above. The reason being that if Applicant is able to make a priority showing under 37 CFR 41.202(d)(1), then this reference will not be applicable as prior art. If Applicants are not able to make the showing, then the references relied on with earlier dates than Pan et al. still stand as prior art.

US 7,060,272 is cumulative with the patents relied upon above and is a divisional of application 09/448,868, from which US 6,461,823 issued and of which US 6,943,020 is a continuation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Claire M. Kaufman, whose telephone number is (571) 272-0873. Dr. Kaufman can generally be reached Monday, Tuesday, Thursday and Friday from 9:30AM to 2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol, can be reached at (571) 272-0835.

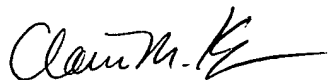
Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1600.

Official papers filed by fax should be directed to (571) 273-8300. NOTE: If applicant *does* submit a paper by fax, the original signed copy should be retained by the applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Art Unit: 1646

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Claire M. Kaufman, Ph.D.

A handwritten signature in black ink, appearing to read 'Claire M. Kaufman', with a stylized flourish at the end.

Patent Examiner, Art Unit 1646

November 6, 2006